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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/506,289 02/18/00 KYOGAKU

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EXAMINER

BERRY, R

ART UNIT

PAPER NUMBER

2818

DATE MAILED:

11/07/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/506,289

Applicant(s)

Kyogaku et al.

Examiner

Renee Berry

Group Art Unit

2818



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-14 is/are pending in the application.

Of the above, claim(s) 12-14 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-11 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2818

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of Group I in Paper No. 7 is acknowledged.
2. Claims 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent no. 6,008,502 to Deguchi et al. in view of US patent no. 5,805,129 to Inaba et al.

Deguchi teaches a method of making an electron-emitting device by disposing an electrically conductive member having a second gap on a substrate; and applying a voltage to the electrically conductive member while irradiating at least the second gap with an electron beam from electron emitting means disposed apart from the electrically conductive member in an atmosphere comprising a carbon compound (column 11, lines 8-12).

Art Unit: 2818

In regard to claim 2, Deguchi teaches a method of making an electron-emitting device by disposing first and second electrically conductive members on a substrate with a second gap interposed and applying a voltage to a first and second electrically conductive members while irradiating at least the second gap with an electron beam from electron emitting means disposed apart from the electrically conductive members in an atmosphere comprising a carbon compound (column 11, lines 8-12).

In regard to claim 3, Deguchi teaches a method of making an electron-emitting device by disposing an electrically conductive member having a second gap on a substrate; and irradiating at least the second gap with an electron beam from electron emitting means disposed apart from the electrically conductive member in an atmosphere comprising a carbon compound within a period where a voltage is applied to the electrically conductive member (column 16, lines 62 to column 17, lines 1-16).

In regard to claim 4, Deguchi teaches a method of making an electron-emitting device by disposing first and second electrically conductive members on a substrate with a second gap interposed and irradiating at least the second gap with an electron beam from electron emitting means disposed apart from the electrically conductive members in an atmosphere comprising a carbon compound within a period where a voltage is applied to a first and second electrically conductive members (column 12, lines 1-34).

Art Unit: 2818

In regard to claim 5, Deguchi teaches an electrically conductive member having a second gap electrically conductive film which connects a pair of electrodes to each other and has a second gap in a portion of the electrically conductive films (column 12, lines 35-48).

In regard to claim 6, Deguchi teaches electrically conductive members are a pair of electrodes which are disposed with a second gap (column 4, lines 56-58).

In regard to claim 7, teaches electrically conductive film and a second electrically conductive film which are connected to a first and second electrodes apart disposed respectively and are disposed with a second gap interposed (column 12, lines 35-48).

In regard to claim 9, Deguchi teaches an electron beam is at an energy level not lower than 1 keV and not higher than 20 keV (column 6, lines 3-8).

In regard to claim 10, Deguchi teaches an electron source having a plurality of electron-emitting devices (column 18, lines 55-60/claim 1).

However, Deguchi does not teach the limitations of claims 8 and 11.

In regard to claim 8, Inaba teaches an applied voltage is a pulse like voltage (column 4, lines 61-67) .

In regard to claim 11, Inaba teaches a method of forming an image-forming apparatus having an electron source and an image forming member (column 3, lines 64-66)

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to have modified Deguchi to include applying voltage in a pulse like voltage and forming an image-forming apparatus having an electron source and an image forming

Art Unit: 2818

member, since such a modification would result in the avoidance of image quality degradation, as described in column 2, lines 23-27 of Inaba et al.


Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent no. 5,541,752 discloses an image forming apparatus.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renee R. Berry whose telephone number is (703) 305-4544.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached on (703) 308-4910. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Examiner's Note: References not considered in the IDS were not submitted. Please supply a copy of the Journal articles and Japanese references.


Renee R. Berry

November 1, 2000